



Minuteman Repeater Association

The Minuteman

Volume 55 Number 2 November 2025
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The Minuteman Repeater Association is a non-profit organization providing communications infrastructure and volunteers for community and emergency events.

Membership Meeting: Wednesday, 19 November 2025 ~7:30 - 9:30 pm

Antenna Modeling ~ Part I: EZNEC **Larry Banks - W1DYJ**

This is a Hybrid meeting: Marlborough Central Fire Station + ZOOM
(Directions to the Marlborough Central Fire Station, Marlborough, MA on Page 3)
Members: log into your account on MMRA.ORG to obtain the ZOOM info.

This presentation will start with some history detailing why Larry has always been interested in understanding antennas. It will then go over the use of EZNEC, ending with a real world example. It will hopefully help you get a start at modeling your own antenna systems.

Licensed in 1961 as novice KN1VFX, Larry became W1DYJ in 1966. After acquiring three degrees in EE from MIT, Larry was hired in 1969 by Hewlett-Packard Medical's Cardiac R&D lab in Waltham MA (later in Andover MA,) working on Electrocardiographs and then Cardiac Ultrasound systems. He moved to HP Medical Education in 1993, responsible for technical and project management training. When HP split apart, he became Agilent Technology's global program manager for their Learning Management System. "Retiring" in 2005, he consulted for Avago (now Broadcom) on eLearning technologies through 2012. He now spends his time chasing DX and contesting in Woburn, playing with antennas, traveling with his wife Maren, and attending many jazz and classical concerts. He is the net manager and newsletter editor for the MMRA, publications editor for HamXposition, and a member of the YCCC.

***As of 15 October, 106 members of the
MMRA have not renewed their membership
for this year.***
PLEASE RENEW SOON!

The MMRA has a new USPS address:
Minuteman Repeater Association
PO Box 2192
Littleton, MA 01460-3192

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President's Corner ~ David Hornbaker, N1DCH***Autumn tidings to all!***

We are making progress on getting back the repeaters that are off air. Billerica 220 is in service and hopefully, 147.12 and the link radio will be on air shortly. The Boston 900 burn in is complete and the board is arranging to have it delivered. The new home of the Quincy repeaters is ready, and the antennas will arrive next month. If the weather cooperates, we will soon have everything up and running!

The MMRA has a new mailing address: Minuteman Repeater Association, PO Box 2192, Littleton, MA 01460-3192. Please update your records.

All MMRA memberships expire on August 31 of the membership year. Please check your profile and if your membership expires in 2025, please renew. Renewals may be done on the website, or you can mail your renewal to: Minuteman Repeater Association, PO Box 2192, Littleton, MA 01460-3192. Please allow 7 days for us to process your renewal. Please allow 14 days for renewals that are mailed. While you're on the website (<https://www.mmra.org>) checking your expiration date **please verify your email address**.

Join us for the November 19th, 2025, membership meeting at Marlborough Central Fire Station 215 Maple St., Marlborough. If you cannot make it to Marlborough, this will be a hybrid meeting, and the Zoom meeting information is available on the website (www.mmra.org). You must be logged into the website to view the information.

The MMRA Elmer/Mentor Forum name has changed to MMRA Ham Radio Chat. The MMRA Ham Radio Chat is a Zoom meeting, which is held on the second Wednesday of the month, and is open to all. You do not have to be a member or licensed to attend. See the article later in this newsletter for more information.

Join us Tuesday nights at 8:00 PM for our weekly Technical Information and Other Stuff (TiaOS) Net, on the linked repeaters of the MMRA. There will be a lively discussion on all sorts of HAM issues, including equipment, antennas, software, repeaters, and other stuff. The main purpose is to test our ability to link up the repeaters in case of an emergency, or to support some event like a marathon. You can also join via EchoLink. See below for more information.

You can find out more information about how and when the repeaters are linked on the website (https://www.mmra.org/repeaters/repeater_linking.html).

Please remember to keep your profile up to date, especially if your email changes. Note that if your callsign changes, send email to contact@mmra.org and we will update your callsign in the database.

Upcoming MMRA Amateur Radio License Exam sessions:

The November exam Session will be held on Saturday, November 22nd at 9:15 AM, at Marlborough Public Library, Meeting Room 2, Marlborough, MA

<https://www.bing.com/maps?q=215+maple+st+marlborough+ma&FORM=HDRSC4>

The December exam Session will be held on Saturday, December 20th at 9:15 AM, at the Marlborough Public Library, David Meeting Room, Marlborough, MA

<https://www.bing.com/maps?q=22+Witherbee+Street+Marlborough%2C+MA+01752&PC=U531&FORM=ANCMS9>

For more information and a link register in advance see <http://www.mmra.org/Exam.html>. Walk-ins are welcome.

Please remember to bring a State ID, your FRN, and if upgrading, a copy of your current license (from FCC website) or proof of license from ARRL or QRZ website. For more information, contact Ron – WO1E at ve@mmra.org or wo1e@mmra.org.

Net Control Operators wanted! Interested in becoming a control operator for the TiaOS net? Larry is looking for a back-up operator. Contact Larry Banks – W1DYJ: w1dyj@mmra.org.

Do you know someone that has passed the Technician test (element 2) in the last year? They are eligible for free membership in MMRA. Have them send email to contact@mmra.org requesting membership. The club secretary will contact them with details on how to qualify.

Treasurer's Report ~ Kevin Paetzold, K1KWP

The MMRA receives donations each year. On behalf of the club I would like to acknowledge and thank the following members who have donated since my list in the September newsletter: **N1HBR** and **KD1CY**. Hopefully I did not miss anyone on this list.

I only count paid memberships (I am the treasurer :-). So far **254** members have either renewed or recently joined. From a pure money/parity perspective that indicates 6 additional members have not yet renewed (or not recently joined). That also means we will probably only have an about \$200 in additional dues we can expect to receive (between now and May 31, 2026).

The MOU for the Billerica repeater was finally signed by the city. There was a trip by the tower company in October but with great disappointment an additional trip will be required. There is about \$1860 in membership approved spending remaining for this site. There is a good chance that will not be enough to complete this. Tower climbers have not yet been paid (or invoiced) for any of their work. Stay tuned.

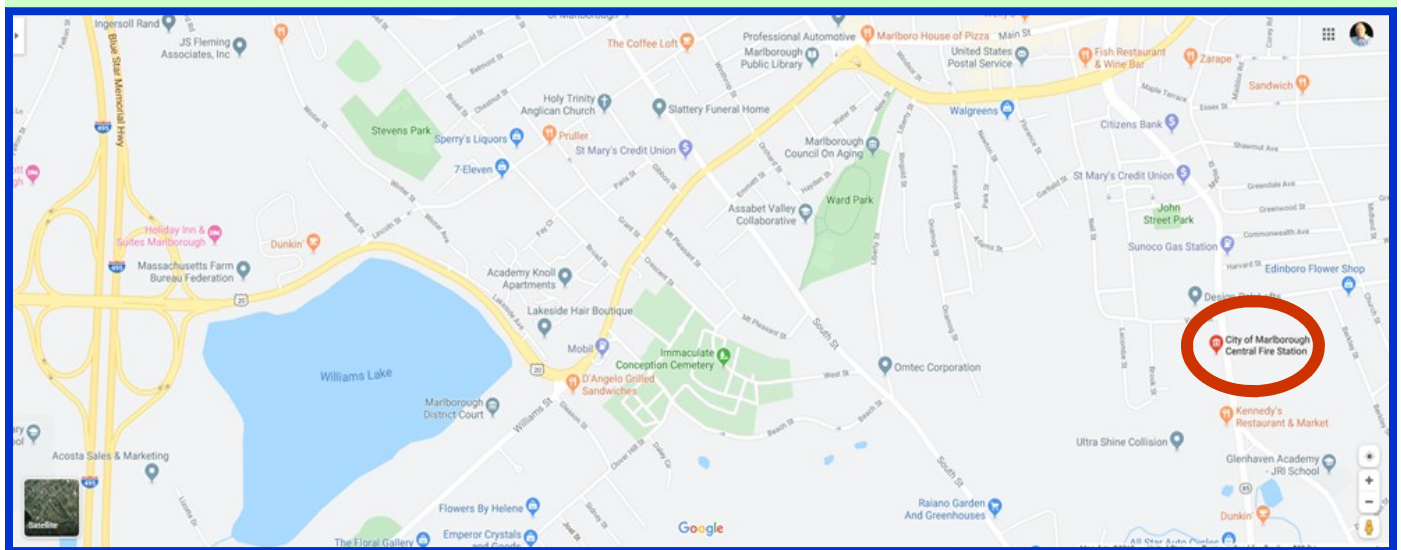
The relocation of the .67 and .40 repeaters seems to be actually approved by that site. New antennas for this site have now been ordered totaling \$3200. The antennas will supposedly arrive in second half of December. There is about \$2300 in membership approved spending remaining for this site.

I would like to thank **WA1NVC** for driving the conversion to AllStar from echolink/irlp. This should provide all the connectivity we had before but will allow multiple simultaneous connections (vs just one) and eliminate the need to connect to NEWENG2 for things like the Tuesday night TIAOS net.

On June 1, 2025 we had \$19147.84. At this writing we have \$22386.92. On June 1, 2026 I predict we will have \$12675.33 minus any additional spending that I do not already know about.

73, K1KWP

Directions to:
Marlborough Central Fire Station, 215 Maple St (RT 85), Marlborough, MA
Enter through the side classroom door.



Billerica Site Update ~ Bob DeMattia, K1IW

The Billerica 224.88 repeater is now on the air from the new site. Pending a new coax installation, 147.12 will return as well. The antennas are already up. All the equipment is in place. *Note:* The link antenna is not up yet, so the 222 repeater is not yet linkable.

Originally there were five pre existing coax runs on the tower. Unfortunately only two were good. The tower crew, working on their own, decided to connect 224.88 (pl 103.5) and a non-MMRA repeater, 448.425 (pl 79.7). We have not been given an install date for the last coax yet.

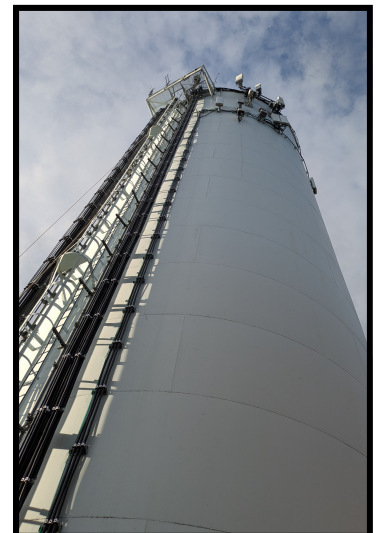
If you have 222 or 440 capability, you can give the ones that ARE up a try.

Here is a photo of the inside of the Billerica Shack. The tan rack toward the center of the photo is 147.12 and 224.88. The blue/silver rack in the foreground is 448.425.



Some terrain data

	Old Site	New Site
Site AMSL	188'	276'
Structure	155'	110'
Antenna ASML	343'	376'
Height Above Average Terrain	179'	214'



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Called to order @ 7:30PM

Repeater Status Report: - Bob DeMattia, K1IW — 9/17/25 Status

Billerica 147.12 – Equipment remains onsite. The antenna remains with the installer. MMRA's Agreement with the town is scheduled for discussion at their October 6th Select Board Meeting.

Quincy 146.67 & 224.400 – The link radio failed. The Repeater has been removed, currently on workbench. The System will be installed at MRE until the new location is ready.

[Editor's update: We have been the go ahead to install at the new site. Antennas are on order and are due to arrive in December. Depending on weather, we may or may not be able to install them.]

Burlington -145.43 (ex-Belmont) – is operational, but the Receiver has limited functionality. Bob has some ideas to improve it. He will get to it probably in a month or two.

Brookline 145.160 – (DSTAR) It is still questionable as to how well the receiver is working.

Weston – 146.79 – Antenna SWR is still high, but repeater works.

Lowell – 442.250 - The link transmitter has begun working again on its own, putting a strong signal into HUB1.

Boston 900 The burn-in is taking place in Ashland. SCOM issues need to be resolved before moving it to Boston.

Boston and Marlborough 900 – SCOM issues switching between IRLP and AllStarLink linking to NEAR 900.

All other Repeaters: Functioning normally.

Elmer/Mentor Forum – Kevin, K1KWP

Sessions are held on the second Wednesday each month. The past couple of months the attendance has dropped despite lively participation by those on our zoom session. We discussed many other general issues which prompted a brief discussion on updating the title of this forum to attract a more diverse range of people to join and participate. I will take the liberty to suggest the word "ragchew" in this forum's title. Other suggestions are welcome.

HamXposition–August 21-24, 2025, in Marlborough

Special thanks to those who stopped by our booth.

We had 2 new member applications. Eight new Hams applied for free membership and 22 members renewed.

Raffle Ticket sales totaled \$187

The MMRA VE Team, conducted VE sessions: The Team administered a total of 21 tests during the weekend.

Ethan C Geil – AC1UX who started the day unlicensed earned an Extra Class ticket.

Exam Session–September—Saturday, October20, 2025, at 9:00 AM

Online Registration & Walk-Ins Welcome

MarlboroughCentral Fire Station, 215 Maple St (Rte 85) Marlborough MA 01752.

Please tell your friends, who are interested in taking tests, that they must have photo IDs and FRNs (and please **obtain your FRN#** from the FCC Website **prior to arrival**).

Copy of license required if upgrading (or proof from the ARRL or QRZ)

Note: SS#s, are no longer accepted by the FCC. Everyone must have an FRN.

Exam Session – October — Saturday, October 18, 2025, at 9:15 AM

Online Registration & Walk-Ins Welcome

Marlborough Public Library Meeting Room 1, 18 Witherbee St, Marlborough MA 01752.

See above for more information.

Upcoming Meetings

October 15, 2025, 7:30 PM — Business Meeting / Zoom

November 19, 2025, 7:30 PM — Membership Meeting / Marlborough Central Fire Station and Zoom
Antenna Modeling Part 1 EZNEC / Larry Banks, W1DYJ

December 17, 2025, 7:30 PM — Business Meeting / Zoom

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January 21, 2026, 7:30 PM — Membership Meeting / NE Sci-Tech and Zoom

Introduction to IT-65 & WSPR / Charles Bures, WA3TR

February 18, 2026, 7:30 PM — Business Meeting / Zoom

March 18, 2026, 7:30 PM — Membership Meeting / NE Sci-Tech and Zoom

How to Precisely Calibrate Your Transceiver / George Allison, K1IG

April 15, 2026, 7:30 PM — Business Meeting / Zoom

May 20, 2026, 7:30 PM — Annual Meeting: Elections & Emergency Fund Vote / LOCATION: TBA

A Technician's Journey: From HT to HF / David Kula, KC1VZH

Tuesday night at 8:00 PM (year-round)

Technical, information and Other Stuff Net / MMRA Linked Repeaters

Presentation by Anthony Luscre, K8ZT — Technicians, Life Beyond Repeaters

Anthony was first licensed in 1981 as KA8NRC. He has been a QRP Operator from his very first QSO (no one told him Novices should not start with a 2-watt QRP rig). He changed his call sign to K8ZT in June 2000 after updating to Extra Class License.

He is active in a variety of Amateur Radio activities, but his favorite activity is operating – whether it is contesting, DXing, rag chewing or satellites, etc. CW Phone or Digital, the QRP contacts have added up and now top 115,000. Anthony was drawn to contesting by his love of working DX and has consistently finished in the top ten of various major contests and finished first in the World and US in both CQ Worldwide Phone and CQ QRP categories multiple times. As a bonus, his QRP DXCC total recently topped the 328 milestone, and he has completed 11 band WAS QRP.

Anthony's fast-paced presentation starts with getting on the air as it is most important as newly licensed Hams will likely drop the hobby unless they become involved with some activity. Obviously, upgrading to General and Extra Class provides more privileges from the FCC, but the Technician Class offers a lot more than VHF/UHF Repeaters. His presentation focused on activities like Simplex communications, CW on all the Ham Radio Bands, connecting with Satellites, Digital forms like FT8, RTTY as well as Contesting. Technicians are permitted to operate on the entire 6 meter band and may use certain sections of the 10 meter band when propagation allows. One source, in addition to all the collateral material he mentioned is the ARRL's monthly publication called "On the Air" at <https://www.arrl.org/on-the-air> which is focused on newly licensed Hams. **This talk is available at** <http://tiny.cc/btech> . His website is at www.k8zt.com which includes many talks and resources.

Meeting Attendees at New England Sci-Tech, Natick MA

David Hornbaker, N1DCH; Ken Horton, KA1GFN; Deb Horton, N1NVJ; Larry Banks, W1DYJ; Kevin Paetzold, K1KWP; Stephen Babbitt, KC1LPZ; David Kula, KC1VZH; Bob Phinney, K5TEC; Glenn Ghidaleson, WA2KRS; Ron Rothman, WO1E; James Sullivan, KC1WMW; Bill McIninch, KA1MOM; Lizzie DeMarco, KC1SUY; Darin Larabee, KC1WVQ, Juan Jimenez-Tirado, K1CPR

Zoom Meeting Attendees:

Joe Fratto, K1UN; Glenn Small, KV1GS; Sean St Hilaire, KC1YAO; Kenny Peluso, KC1PFS; Joseph Chapman, NV1W; Lee Gutkopf, KC1YIL; Horace Dufresne, KC1TJX; Grayson Schaefer, KC1YAC; Ariel Bekefi, KC1FEH; Anthony Luscre, K8ZT;

Meeting Adjourned at 8:51PM

Respectfully Submitted by Stephen M Babbitt, KC1LPZ, Clerk

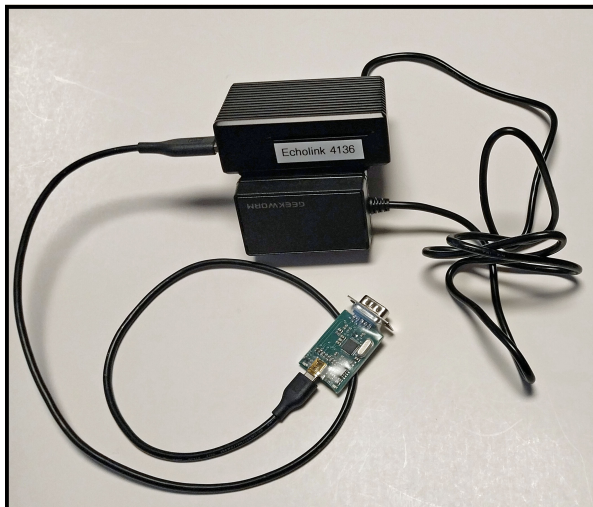
MMRA Adds Four(4) AllStarLink Nodes to It's Network Roger Coulson, WA1NVC

The MMRA is "dipping its toe" into ASL (AllStarLink) internet connectivity. From the AllStarLink website:

AllStarLink is a network of Amateur Radio repeaters, remote base stations and hot spots accessible to each other via Voice over Internet Protocol. AllStarLink runs on a dedicated computer (including the Rasperry Pi) that you host at your home, radio site or computer center. It is based on the open source Asterisk PBX running our app_rpt application. App_rpt makes Asterisk a powerful system capable of controlling one or more radios. It provides linking of these radio "nodes" to other systems of similar construction anywhere in the world via VoIP.

AllStarLink's primary use is as a dedicated computer node wired to your repeater or radio. Connections from Echolink and other VoIP clients are supported.

The MMRA has purchased the hardware to make two more AllStarLink(ASL)/Echolink nodes for HUB1 & HUB2. The hardware has been assembled and the software installed. Hopefully they can be installed soon.



These nodes can support many simultaneous Echolink and ASL connections eliminating the need to use the problematic IRLP/Echolink Reflector 9127. These nodes also support ASL connections from ASL nodes and ASL Apps. The MMRA did not previously have any ASL connection capability. HUB1 will be ASL node 671071 / Echolink 4133, and HUB 2 will be ASL 671072 / Echolink 4136.

The cost for these two ASL nodes was less than the cost of one IRLP node.

ASL nodes are already integrated with our two 900 repeaters: ASL node 650110 on the Marlboro 900 repeater, and ASL node 650111 on the Boston 900 repeater. Note that these two nodes are restricted to the NEAR 900 hub; you cannot connect to them directly

One of the ASL nodes.

The metal cases for the RPi 5's are fanless for long life.

The wall wart supplies the power. The USB cable with a small module terminating in a DB9 is the Scm 7330 interface.

The Amateur's Code ~ Paul M. Segal, W9EEA, 1928

The Radio Amateur is:

CONSIDERATE...never knowingly operates in such a way as to lessen the pleasure of others.

LOYAL...offers loyalty, encouragement and support to other amateurs, local clubs, and the American Radio Relay League, through which Amateur Radio in the United States is represented nationally and internationally.

PROGRESSIVE...with knowledge abreast of science, a well-built and efficient station and operation above reproach.

FRIENDLY...slow and patient operating when requested; friendly advice and counsel to the beginner; kindly assistance, cooperation and consideration for the interests of others. These are the hallmarks of the amateur spirit.

BALANCED...radio is an avocation, never interfering with duties owed to family, job, school or commu-

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Called to order @ 7:30PM

Amateur Radio Emergency Preparedness Act

Larry, W1DYJ, brought to our attention that the ARRL has launched a nationwide grassroots campaign aimed at securing the passage of federal legislation that will grant Amateur Radio Operators the same rights to install antennas on their property as those enjoyed by users of TV antennas, wireless internet and flagpoles. Go to – <https://www.arrl.org/HOA> – and help us by sending your letters to your Representatives and Senators. At to-night's meeting it was decided that Dave, N1DCH, will send a letter representing the MMRA. But we also ask that you as an individual do the same.

Repeater Status Report: - Bob DeMattia, K1IW –10/15/25 Status

- **Billerica 147.12** – Installation coming soon.
- **Quincy 146.67 & 224.400** – Off the air until further notice. In the meantime, Bob is completing repairs to make it ready to install at its new location

[Editor's update: We have been the go ahead to install at the new site. Antennas are on order and are due to arrive in December. Depending on weather, we may or may not be able to install them.]

- **Echo/IRLP 4136 (Hub2 442.700) and IRLP 4978 (Marlborough 900)** Out of service for upgrade.
- **Marlborough 900** – is still on NEAR900 because NEAR uses ASL. It can't do TIOS since that requires IRLP.
- **EchoIRLP 4133 (Hub1 449.925)** will be next only after 4136 (is reinstalled and confirmed working).
- **Boston 900** – is in burn-in testing (check with Roger for more details).
- **Burlington - 145.43 (ex-Belmont)** – pending install of additional cavity to fix de-sense issue.
- **Weston – 146.79** – Antenna SWR is still high. No activity scheduled to address this yet. The repeater works intermittently.
- **Brookline 145.160–(DSTAR)** It is still questionable as to how well the receiver is working.
- **Lowell – 442.250** - It is putting a strong signal into HUB1.

All other Repeaters: Functioning normally.

Additional Note: We have two spare Pi3's for the upgrades above. We need to purchase 1 new Raspberry Pi3 for the third one. FEMARA has a spare which the MMRA can purchase for \$40 under the maintenance portion of our budget.

Boston 900 upgrade – Roger, WA1NVC

The very old Raspberry Pi used for IRLP failed and locked up the NEAR 900 Network. Roger supplied a Pi 3b, case and PPS. Randy, N3HFK, installed newer IRLP software and transferred the node details to the Pi 3b. Bob updated the SCOM7330 so it can now switch correctly between IRLP and ASL nodes. He also did the Marlborough 900 SCOM 330 so both are the same.

Boston and Marlborough have been connected to NEAR 900 via ASL now for at least a week and is working fine.

The Boston TP-RA70T+ router hung up last week. This is the same router used at Marlborough. Marlborough has V6.02 FW and Boston had the latest V6.0.4 FW. We have downgraded FW to V6.03 (v6.0.2 was not available online) and we hope it fixes the problem.

ASL 3.0 Node for Hub 1– Roger – WA1NVC – Funding Question

Does the MMRA want to authorize spending for the HUB1 ASL node, so we no longer need to use Reflector 9127 for Echolink? The group discussed implementing an All-Star Node and IRLP setup using Raspberry Pi 5s, with Bob proposing to create two separate ASL nodes - one for Hub 1 and another for IRLP connectivity. They agreed to purchase two Pi 5s initially, with the possibility of adding another for Hub 2 later. Roger will build the interface adapters for connecting to the 7330 repeaters, and the team discussed potential RF shielding solutions including

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ferrite beads and encasing the board in a box. Kevin made a motion, second by Dave and passed unanimously saying that the total budget is set not to exceed \$500 for both units.

Treasurer's Report – Kevin -K1KWP

This is MMRA fiscal year 2025-2026. It starts on June 1, 2025 and ends May 31, 2026. In contrast our Membership years starts September 1, 2025 and ends August 31, 2026. Members expiring in 2025 are in their "grace" state.

If we spend all the Milton/Quincy \$ and all the Billerica \$ and do not spend/decide on any other spending (unlikely), the projected balance on May 31, 2025 will be \$13,696.97, probably less by June 1st next year. A delta of **-\$5,450.87** from June 1, 2025 and probably more by June 1, 2026. Donations received this year were \$1,195.32. The amount of \$545 in dues is required to match last year's total. Ken – KA1GFN - will be emailing a friendly reminder to those in their grace or expired status.

Elmer/Rebranding Forum – Kevin – K1KWP

These Meetings are on the 2nd Wednesday of each month designed primarily to help new Hams get on the air and guide them into the many other facets of Amateur Communications. The informal consensus of participants believe we should use a title and/or description that will attract a wider audience. The last couple of meetings have turned into an informal chat session beyond just providing guidance.

Words used for a title are "SWR", "Rag chew", "Chat" and as I am writing this summary "Guide" or Guidance" is popping into my mind. No decisions have been made yet. We'll continue these meetings as informal, relaxed sessions focused on mutual learning. Please go to our website for the Zoom session details. Next session is on Wednesday, November 12th at 7:30 PM.

HamXThird Place Prize – Ken – KA1GFN

During today's meeting the question was answered on what to do with the Radioddity GC-5. Since its price is under twenty dollars, it was decided to donate it to the VE Team to give/offer to a new Ham as their first radio to get on the air. The discussion evolved by buying more with part of the VEC \$609.05 budget. David, KC1VZH, volunteered to program these radios with MMRA Repeater frequencies and PL tones along with several other local repeaters to give a jump start getting on the air.

New Mailbox – Kevin -K1KWP

PO Box 2192, Littleton MA 01460-3192. Our previous PO Box will terminate at the end of October.

Upcoming Events

First annual Amateur Radio Flea Market of the Providence Radio Association being held **Sunday, Oct 19, 9AM-1 PM** at the Smithfield Sportsman Club, 5 minutes off Rt 44 and Rt 295, in Greenville RI, Rain or Shine!

FREE Admission with unexpired canned goods or a \$5 donation to the RI Community Food Bank and the PRA Foundation. Sellers set up at 8 AM, \$10 at the door, indoor and outdoor spaces available on a first come, first serve basis.

The Blue Hill Observatory is sponsoring the annual Southern New England Weather Conference for Saturday, Oct 25 from 9:30 AM-4:30 PM at Meditech in Canton, MA

<https://bluehill.org/southern-new-england-weather-conference/>

Exam Session – October 18, 2025 — 9:15 AM

Online Registration is the preferred option / Walk-Ins are still Welcome / HamStudy.org: for Exam details
Marlborough Public Library Meeting Room 1, 18 Witherbee St, Marlborough MA 01752.

Please tell your friends, who are interested in taking tests, that they must have photo IDs and FRNs (and please **obtain your FRN#** from the FCC Website **prior to arrival**).

Due to Federal Government shutdown a FRN will NOT be required to take the Technician Exam. It will be re-

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quired before the license is issued. Details will be available at the exam session.

Copy of license required if upgrading (or proof from the ARRL or QRZ)

Note: SS#s, are no longer accepted by the FCC. Everyone must have an FRN.

Exam Session – November 22, 2025 — 9:15 AM

Online Registration is the preferred option / Walk-Ins are still Welcome / HamStudy.org: for Exam details

Marlborough Public Library Meeting Room 1, 18 Witherbee St, Marlborough MA 01752.

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How to Precisely Calibrate Your Transceiver / George Allison, K1IG

April 15, 2026, 7:30 PM — Business Meeting / Zoom

May 20, 2026, 7:30 PM — Annual Meeting: Elections & Emergency Fund Vote / LOCATION: TBA
A Technician's Journey: From HT to HF / David Kula, KC1VZH

Tuesday night at 8:00 PM (year-round)

Technical, information and Other Stuff Net / MMRA Linked Repeaters

Newsletter

Information to Larry, W1DYJ / Email W1DYJ@mmra.org

Due date: Friday, October 31, 2025 / Publish Date: November 10, 2025

Meeting Attendees:

David Hornbaker, N1DCH; Larry Banks, W1DYJ; Kevin W Paetzold, K1KWP; Stephen Babbitt, KC1LPZ; Ken Horton, KA1GFN; Roger Coulson, WA1NVC; ; Rob Evans, N1BE; David Kula, KC1VZH; Joe Fratto, K1UN; Stephen Contrado, KC1VJH; Tom Sullivan, KC1VHD; Jonathan Traum, K1BTZ; James Lee, N1DDK; Jane Eastman, KV1VHN; Joe Conlon, KB1JPL; Brian Bodiya, KC1WIH; Lee Gutkopf, KC1YIL; Jim Babb, AA1BA; Bryan Cerqua, W1BRI; Bob De Mattia, K1IW; Bruce Pigott, KC1US; Joe Bonapace, KC1WOK; Ron Rothman, WO1E; Brendan Welch, W1LPG; Aaron Bauch, NE1AB; Brent De Witt, AB1LF, Kellye Eversole, K1SOE;

Meeting Adjourned at 9:13PM

Respectfully Submitted by Stephen M Babbitt, KC1LPZ, Clerk

**Join us for the MMRA Ham Radio Chat
on November 12th and December 10th**

MMRA Ham Radio Chat replacing the Elmer Forum Kevin Paetzold, K1KWP

The "Elmer Forum" was created as a reaction to dismal statistics seemingly throughout the hobby on newly licensed ham retention. That included that most new licensees supposedly never transmit even once...

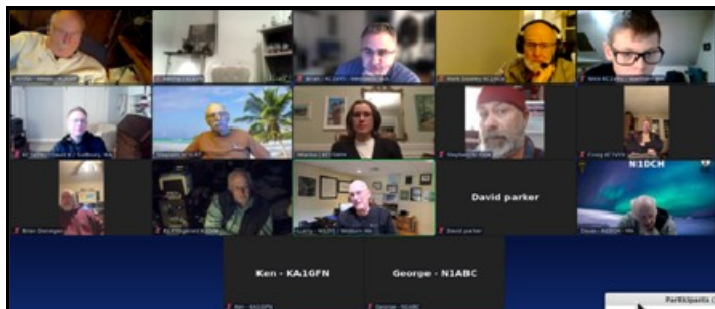
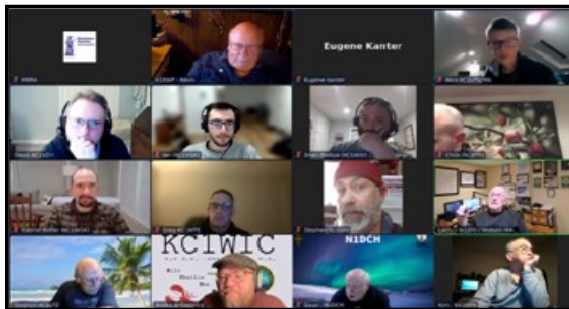
The name choice was surprisingly controversial from that start even though it was the natural first/obvious name I thought of. Some people did not like the word Elmer. Some people did not like the word Mentor.

The Elmer forum has run for 11 sessions. It was clear from the beginning that the information flow was two-way and that everybody seemed to be learning new things. It organically evolved into a round table discussion of various ham topics as well as a place for new or prospective hams to ask questions. The regulars decided it should be renamed to reflect this evolution.

This new name needed to make it clear that the forum is a place for a general round table discussion of ham topics and not just for Elmering. But it is also important that we make it clear that new and prospective hams should see this is a place to get their questions answered. *It is for both new and prospective hams and for all of us.*

Various new names were proposed. Proposed new names also proved controversial. Eventually we settled on "MMRA Ham Radio Chat".

We hope to see you there on the second Wednesday's at 7:30PM on ZOOM



The MMRA Ham Radio Chat

The Minuteman Repeater Association (mmra.org) hosts a monthly ham radio discussion on ZOOM for anything Ham Radio related.

Ask questions. Share latest discoveries. Speak with other hams. Info on getting a License and getting on the air. Buying equipment. Programming your radio. Info about local ham resources.

Find an elmer/mentor.

Everyone is invited whether licensed or not.
No need to be a member of the MMRA.

When: Second Wednesday of each Month at 7:30PM

upcoming 2025 dates: Nov 12, Dec 10

upcoming 2026 dates: Jan 14, Feb 11, Mar 11, Apr 8, May 13, Jun 10,
Jul 8, Aug 12, Sep 9, Oct 14, Nov 11, Dec 9

Where: ZOOM Meeting ID: 876 8326 0138 Passcode: elmer
full zoom invite info at
mmra.org/elmerforum/elmer_zoominfo.txt



Ham radio "Elmers" are radio operators who provide mentoring, guidance, and assistance to new and prospective hams, helping them learn the technical aspects of radio operation, regulations, and navigating the social aspects of the ham radio community.

Elmers are the unsung heroes of ham radio, passing on their knowledge and enthusiasm to the next generation of operators. Whether you have been licensed for weeks or for years you may be able to help answer questions from others. Share your knowledge and experience with other hams EVEN if you are just recently licensed.

rev1540: 20251106

**Join us on
November 12th
and
December 10th**

Upcoming MMRA Meetings

Meetings usually start at 7:30 PM

Meeting locations and times are subject to change.

Consult the MMRA website for the most up-to-date information.

**ZOOM Teleconference login info is available
once you log into your account on MMRA.ORG**

Non-members: if you wish to attend, email contact@mmra.org.

Elmer Forums / ZOOM: 9/10, 10/8, 11/12, 12/10

Business Meetings / ZOOM: 10/15, 12/17, 2/18, 4/15

November 19, 2025 Membership Meeting

Speaker: Larry Banks— W1DYJ

Antenna Modeling Part 1— EZNEC

Location: Marlborough Central Fire Station + Zoom

January 21, 2026 Membership Meeting

Speaker: Charles Bures - WA3TR

Introduction to IT-65 & WSPR

Location: NE Sci-Tech + Zoom

March 18, 2026 Membership Meeting .

Speaker: George Allison - K1IG

How to Precisely Calibrate Your Transceiver

Location: NE Sci-Tech + Zoom

May 20, 2026 Annual Meeting & Elections

Speaker: David Kula -KC1VZH

A Technician's Journey: From HT to HF

Location: TBA

MMRA Leaders

Executive Board — Officers

President	Dave Hornbaker	N1DCH
Vice President	John Spencer	WA1MDD
Secretary	Ken Horton,	KA1GFN
Treasurer	Kevin Paetzold	K1KWP
Clerk	Stephen Babbitt	KC1LPZ

Executive Board — Directors

Director >2026	Rob Evans	N1BE
Director >2026	James Lee	N1DDK
Director >2027	Bob DeMattia	K1IW
Director >2027	Roger Coulson	WA1NVC

Appointed, Voting

<u>Technical Officer</u>	Bob DeMattia	K1IW
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Repeater Trustees

Billerica 147.12, 224.88	Mike Rioux	W1USN
Boston 146.82	John Mullaney	K1BOS
Boston 927.0625	Rick Zach	KK1RZ
Brookline 145.16	Joyce DeMattia	K1MRA
Burlington 145.43	Ed Curley	KC1CLA
Hopkinton 447.775	Bryan Cerqua	W1BRI
Lowell 442.25	Bob Phinney	K5TEC
Marlborough 53.81	Bryan Cerqua	W1BRI
Marlborough: 29.68, 144.39, 147.27, 223.94, 224.70 449.575, 449.925, 927.70		
all as W1MRA	Bill Northup	N1QPR
Mendon 146.61	Kevin Paetzold	K1KWP
N. Reading 146.715	Bruce Pigott	KC1US
N. Reading 446.775	Larry Banks	W1DYJ
Quincy 224.40	Bill Dunn	N1KUG
Quincy 146.67	Bryan Cerqua	W1BRI
Weston 146.79	Joe Weisse	W1HAI
Weston 224.70	Bill Northup	W1MRA
Weston 442.70	Dave Hornbaker	N1DCH

Additional, non-Voting

Newsletter Editor	Larry Banks	W1DYJ
Emerg. Coord.	Kevin Paetzold	K1KWP
Pub. Serv. Coord.	Bruce Pigott	KC1US
VEC Liaison	Ron Rothman	WO1E
Net Manager	Larry Banks	W1DYJ
Web Page Editor	Bob DeMattia	K1IW

President Emeritus

Bob DeMattia	K1IW
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Technical Officer Emeritus

Bryan Cerqua	W1BRI
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Join Us! Every Tuesday @ 8 PM **Technical, Informational and Other Stuff Net**

Keep up with what's happening in the MMRA and ask your ham related questions.

Net Control Operators:

Week 1	W1DYJ	Larry Banks
Week 2	K1BTZ	Jonathan Traum
Week 3	K1KWP	Kevin Paetzold
Week 4	KC1VZH	David Kula
Week 5	KB1OQA	Tom Turner

To connect using Echolink: Conference *NEW-ENG2*

NOTE: we need another NC to be available as a substitute. If you are interested, email: W1DYJ@mmra.org

About the Minuteman Repeater Association

MMRA Control Operators Responsibilities

<https://www.mmra.org/MMRACOPolicy-March2019.pdf>

The Minuteman Repeater Association (MMRA) is dedicated to Amateur Radio and public service. The MMRA maintains a large system of repeaters in Eastern Massachusetts.

The MMRA meets each month from September to June. Meeting times, locations, and talk-in frequency vary and are announced in this newsletter and on weekly nets. Meetings are open to all interested parties. Guest speakers and programs of general interest occur in September, November, January, March, and May. The intervening meetings are also open to all members and are for general business.

The Minuteman newsletter is emailed one week before each general interest meeting. Members are encouraged to submit articles: send to the editor at newsletter@mmra.org. The deadline for articles is the last Friday of the month preceding the meeting.

Each Tuesday evening at 8pm the MMRA links most of the repeaters for an open net. The topic is "Technical Information and Other Stuff". Join us!

Membership in the MMRA is open to all radio amateurs. Annual dues are \$25 per individual or \$35 per family. See our website for details.

Contact information is listed on the top of the last page of this newsletter.

MMRA QRM Policy

MMRA members and all other operators are strongly encouraged to report repeater activity that does not abide by Part 97 rules or accepted amateur radio practice to the board of directors at contact@mmra.org or via other means.

The most effective way (and probably the only effective way) to deal with an individual causing QRM is to NOT engage with that individual on the air. Please include the time and date of any incident.

Repeater and Frequency Information

Band	XMTR Location	Freq	PL	Call	Linking To:		
					Hub 1	Hub 2	
10m	Marlboro East	29.680	131.8	W1MRA	???	???	
Linked to 146.79: 9am-3pm every day							
6m	Marlboro East	53.810	71.9	W1BRI	PTL	PTL	
Remote receive Marlboro West: PL=100							
2m	Brookline	145.160	na	K1MRA	D-Star (REF050C)		
	Burlington	145.430	146.2	KC1CLA	FTL	PTL	
	Mendon	146.610		K1KWP	FTL	PTL	
	????	146.670		W1BRI	FTL	PTL	
	North Reading	146.715		KC1US	FTL	PTL	
	Weston	146.790		W1HAI	PTL	PTL	
	Linked to 29.68: 9am-3pm every day						
	Boston	146.820		K1BOS	FTL	PTL	
	Billerica	147.120		W1DC	PTL	PTL	
	Output tone = 162.2						
Marlborough	147.270	W1MRA		PTL	PTL		
1.25m	Marlborough	223.940	103.5	W1MRA	FTL	PTL	
	????	224.400		N1KUG	FTL	PTL	
	Weston	224.700		W1MRA	PTL	PTL	
	Billerica	224.880		W1DC	FTL	PTL	
70cm	Lowell	442.250	88.5	K5TEC	FTL	PTL: 446.775	
	Weston *	442.700	88.5	N1DCH	Network Hub 2 (PTL to Hub 1)		
	North Reading System Fusion	446.775	88.5 71.9 Local Link	W1DYJ	FTL [88.5]	PTL [88.5]	
	Hopkinton System Fusion	447.775	88.5 71.9 Local Link	W1BRI	FTL [88.5]	PTL [88.5]	
	Marlborough	449.575	na	W1MRA	D-Star (REF050C)		
	Marlborough *	449.925	88.5	W1MRA	Network Hub 1		
33cm	Boston *	927.0625	D244	KK1RZ	PTL	PTL	
	Marlborough *	927.700		W1MRA	PTL	PTL	
PL out = 131.8							

Marlborough 144.390 none W1MRA APRS Digipeater

??? 145.630 146.2 W1MRA Fox Box

*Internet	HUB1- 449.925: IRLP node 4133 / Echolink node 4133 Connected to Echolink NEWENG2 conference (9127) for TIAOS net.	
	HUB2 - 442.700: IRLP node 4136 / Echolink node 4136 Connected to 220 Reflector 9124 on Tuesdays	
	927.0625: IRLP 4977	Normally linked to the NE900 Reflector, 9125. Linked to MMRA via "NEW-ENG2" node 9127 for the TIAOS net. Normally linked together.
	927.700: IRLP 4978	

Notes: FTL = Full Time Linked (or default state)

PTL = Part Time Linked (on schedule or demand)

A repeater can be linked to only one Hub at a time, however the two hubs can also be linked together.

Contacting the MMRA



Members: join mmra@groups.io
to receive member emails.
You must be approved by the moderator.

Officers: contact@mmra.org

Control Ops: control-ops@mmra.org



Minuteman Repeater Association
PO Box 2192
Littleton, MA 01460-3192



<http://www.mmra.org/>



<https://www.facebook.com/mmraham>

MMRA Amateur Radio Exam Sessions

Check out <https://www.mmra.org/exam.html> or email ve@mmra.org

Ask your friends to become a member Just let them know that it is not fully automated. Although they can log into the MMRA website immediately, they need to be manually processed. This could take up to a week.

If you haven't updated your MMRA profile in a while, now is the time! Log into < [MMRA.ORG](http://www.mmra.org) > to do so.

Previous issues of the MMRA Newsletter are available at: [MMRA Newsletter Archive](#).

They are also available at DLARC: <https://archive.org/details/minuteman-repeater-association>

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Nets, etc., on the MMRA System

MMRA Technical Information and Other Stuff Net

Our weekly club net on most of the MMRA repeaters,
Tuesday night at 8:00 pm local.

Heavy Hitters Traffic Net

This ARRL NTS net is active on our repeaters Sunday to Friday evenings from 9:45—11 PM and Saturday from 10-11.

Coast Guard Net

Sundays at 11:00 AM local.

ARES Net

First Monday at 8:30 PM local.

ARRL Audio News

Sundays at 7 PM local

< https://www.mmra.org/repeaters/repeater_linking.html >



NEW ENGLAND SCI-TECH

New England Sci-Tech Inc is a new 501(c)(3) STEM education center, amateur radio training center, and maker space located at 16 Tech Circle, Natick. It is home to New England Amateur Radio Inc (NE1AR) and the youth radio club Sci-Tech Amateur Radio Society (STARS). NE Sci-Tech welcomes memberships and donations via www.NESciTech.org or www.NE1AR.org.

Get connected on the MMRA Repeater System ~ Dave Hornbaker N1DCH

What is the best way to get connected on the MMRA repeater system? Try announcing yourself! Just say your call sign followed by "listening". If you want, you can include the last 3 digits of the repeater frequency. For example, "N1DCH listening" or maybe "N1DCH listening on 925", you may very well get a response. Try to connect by announcing yourself several times.

Most of the time, Marlborough Hub1 (449.925) is linked to the following repeaters, Boston (146.820), North Reading (446.775 and 146.715), Mendon (146.610), Lowell (442.250), and Hopkinton (447.775.) Remember that when the repeaters are linked, you need to wait two or three seconds after you key up and before you speak. This is especially important on the TlaOS net on Tuesday when most of the repeaters are linked.

You can also link (and delink) the repeaters yourself. See the information you received when you became a member, or check the [User Control Codes](#) once you log into the MMRA website.

Try one of the non-linked repeaters too. There are Hams monitoring them as well. For more information on the repeater network and how it is linked at various times, check out https://mmra.org/repeaters/repeater_linking.html.